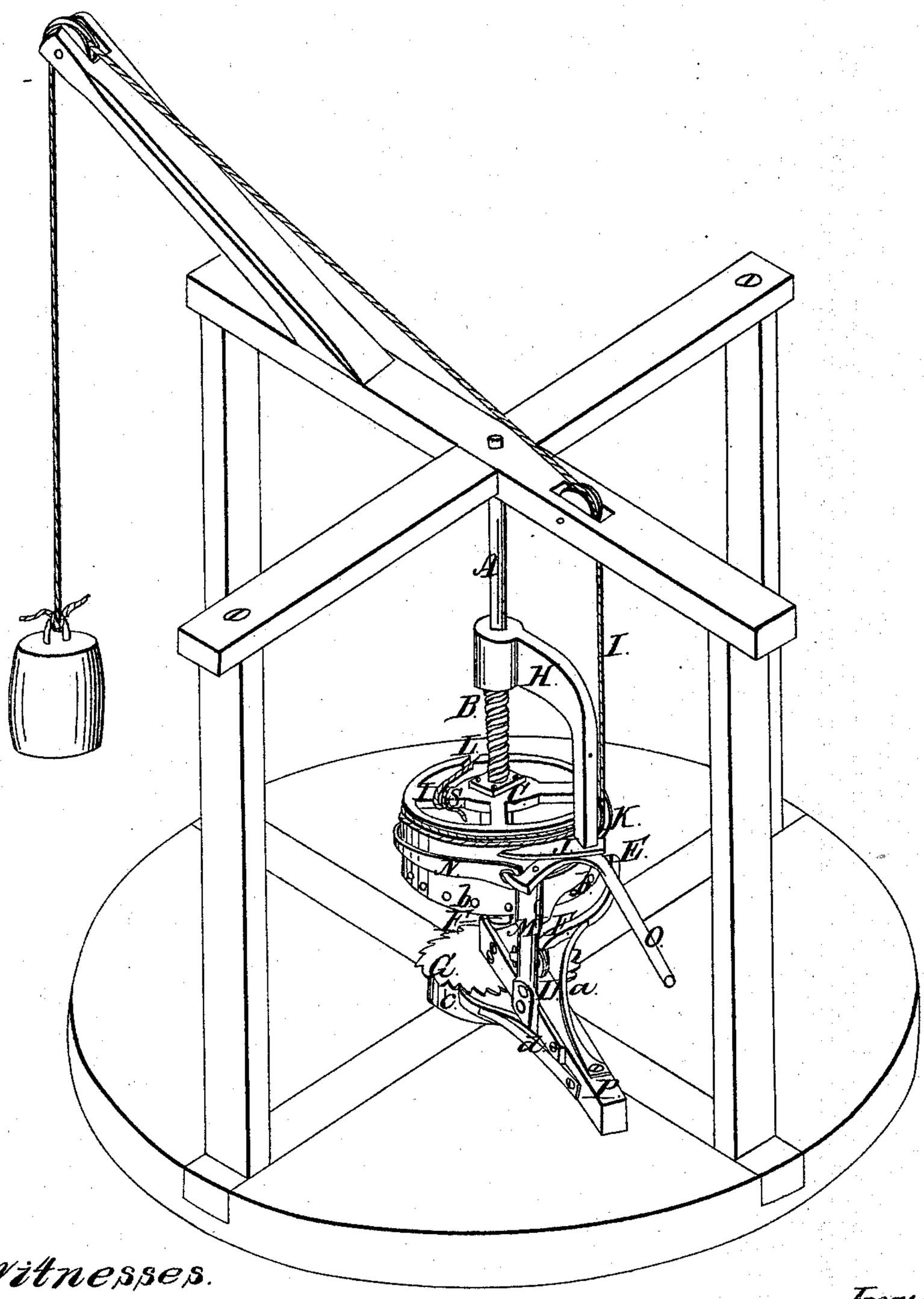
S. A. Hotchkiss,

Derrick.

No. 26,357. Patented Dec. 6, 1859.



Witnesses.

Wilson H. Clark

Inventor.

Sheldon A. Hotchkiss

UNITED STATES PATENT OFFICE.

SHELDON A. HOTCHKISS, OF NEW HAVEN, CONNECTICUT.

MACHINE FOR RAISING WEIGHTS.

Specification of Letters Patent No. 26,357, dated December 6, 1859.

To all whom it may concern:

Be it known that I, SHELDON A. HOTCHKISS, of the town and county of New Haven, State of Connecticut, have invented a new and Improved Machine for Raising Weights, and do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

That the nature of my invention consists in gearing a drum to an upright shaft, with a screw cut on the surface of the shaft, and connecting the drum by means of a pawl-hook to a lever, so that by means of the drum and lever operating together increased power and facilities are obtained for raising weights; and by means of a knee which is attached to the shaft above the screw and near the lower end of the outer angle of which a sheave is attached over which the rope is made to pass, and by the use of the screw, the drum rises as it revolves, and by aid of a zone which surrounds the drum and is attached to the knee, adjusts the coil of the rope which is attached to the weight.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

I make the shaft "A," of suitable material, and fix it firmly to a frame work in a perpendicular position. I cut the screw "B" on the outer surface of the shaft, and into this screw, I fix the gear of the drum "C," so as to have the drum revolve around the shaft, the screw forming its axis. The drum I make of any desired diameter and connect it to the neap or lever "D," by means of the pawl-hook "E," which I keep in place by means of the small spring "*a*." One end of the pawl-hook is attached to the lever at "*f*," and the other end is forced into the holes "*b*, *b*," made in the drum near its lower edge. The shaft forms the fulcrum F of the lever and is made to move around it. I make the ratchet G, and place it around the bottom of the shaft and underneath the lever. I attach the pawl "*c*," to the lever and keep it in place by means of the small spring "*d*," to prevent a reverse movement of the lever. I affix to the shaft above the screw the knee H, having its upper angle project from the shaft a distance equal to the radius of the drum. The other angle falls perpendicularly below the upper edge of the drum. I attach the sheave "K," on the side of the knee near the lower end of the outer angle; and to the lower end of the knee, I affix the zone or metal plate J, with arms extending each way, and curved inward so as to conform to the surface of the drum for the purpose of keeping the rope in place, and it may be extended clear around the drum. I attach the rope "I," to one of the arms of the drum as shown at "S," and pass it through the groove "L," sunk for the purpose in the upper chime of the drum and on to the sheave and from thence over other sheaves and gear to the weight to be raised. I attach to the lever the post "M," in an upright position and to this post I make fast the brake "N," which clasps the drum and connects with the hand lever "O."

I operate my machine by applying the power to the lever at "P." The lever and drum move together around the same direction. The drum as it revolves rises on the screw and takes in the slack rope and adjusts the coil. When the weight is raised to the height desired it is detached from the rope. The pawl-hook is then withdrawn and the drum uncoils the rope and allows it to come home for another weight by a reverse movement. I regulate the reverse movement of the drum by taking hold of the hand lever and applying the brake.

I do not claim the screw, nor the drum nor the pawl-hook ratchet and knee separately considered—but

I do claim—

The zone J, and the screw, drum, pawl-hook, knee and sheave in combination, substantially, and for the purposes set forth.

SHELDON A. HOTCHKISS.

Witnesses:

WILSON H. CLARK,

JOHN C. HOLLISTER.